

What is claimed is:

1. A method of providing an output value for an output device having a device status, the method comprising:
 - providing an output device having an output generating an output signal according to an output value;
 - associating the output with a logic function in communication with a network;
 - associating the logic function with an indicator;
 - receiving a status message from the network;
 - receiving a value message from the network;
 - updating the indicator according to the status message and the device status; and
 - selectively providing the output value to the output from one of the logic function and the value message, according to the logic function.
2. The method of claim 1, wherein associating the logic function with the indicator comprises creating a binding there between.
3. The method of claim 1, wherein updating the indicator according to the status message and the device status comprises receiving at least one of an I/O connection health indicator, a messaging connection health indicator, an I/O connection error indicator, a run event indicator, and idle event indicator, a network error indicator, an I/O point fault indicator, a hardware input indicator, a hardware output indicator, and I/O data from the status message.
4. The method of claim 1, wherein the logic function comprises at least one function block, and wherein selectively providing the output value to the output device from one of the logic function and the value message according to the logic function comprises executing at least one function block according to the indicator.
5. The method of claim 4, wherein the function block comprises at least one of a boolean operator, a flip-flop, a counter, and a timer.

6. The method of claim 5, wherein updating the indicator according to the status message and the device status comprises receiving at least one of an I/O connection health indicator, a messaging connection health indicator, an I/O connection error indicator, a run event indicator, and idle event indicator, a network error indicator, an I/O point fault indicator, a hardware input indicator, a hardware output indicator, and I/O data from the status message.

7. The method of claim 6, wherein associating the logic function with the indicator comprises creating a binding there between.

8. The method of claim 1, further comprising sending a network message according to at least one of the logic function and the indicator.

9. An output device, comprising:
an output providing an output signal according to an output value;
a communication interface adapted to receive messages from a network;
an indicator adapted to receive message information from the communication interface and providing indicator data; and
a logic unit receiving message information from the communication interface, receiving indicator data from the indicator, and performing a logic function;
wherein the logic unit selectively provides the output value to the output according to one of the message information and the logic function.

10. The output device of claim 9, wherein the indicator data comprises at least one of an I/O connection health indicator, a messaging connection health indicator, an I/O connection error indicator, a run event indicator, and idle event indicator, a network error indicator, an I/O point fault indicator, a hardware input indicator, a hardware output indicator, and I/O data.

11. The output device of claim 10, wherein the logic unit comprises a processor, a memory, and a control program.

12. The output device of claim 11, wherein the logic function comprises at least one function block bound to the indicator.

13. The output device of claim 10, wherein the memory comprises at least one indicator including the indicator data.

14. The output device of claim 13, wherein the processor updates the indicator according to network messages and the device status.

15. The output device of claim 14, wherein the function block comprises at least one of a boolean operator, a flip-flop, a counter, and a timer.

16. The output device of claim 9, wherein the logic function comprises at least one function block bound to the indicator.

17. The output device of claim 9, wherein the logic function comprises at least one of a boolean operator, a flip-flop, a counter, and a timer.

18. A method of defining output behavior in an output device, comprising:
defining a logical function using one or more function blocks;
linking the logical function with at least one status/event indicator, wherein the status/event indicator comprises information relating to the status of one or more devices on a network; and
providing an output value according to the logic function and the at least one status/event indicator.

19. The method of claim 18, wherein defining the logical function using one or more function blocks comprises configuring the function blocks to implement one or more of boolean operations, flip-flops, counters, and a timers.

20. The method of claim 18, wherein defining the logical function using one or more function blocks comprises using a network configuration tool.

21. The method of claim 18, wherein linking the logical function with at least one status/event indicator comprises creating a binding.

22. The method of claim 18, further comprising updating the status/event indicator with information from a network message comprising at least one of an I/O connection health indicator, a messaging connection health indicator, an I/O connection error indicator, a run event indicator, and idle event indicator, a network error indicator, an I/O point fault indicator, a hardware input indicator, a hardware output indicator, and I/O data.